

**OFFICIAL
PATENT**

S/N 09/614,631

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Applicant:	HILGREN ET AL.	Examiner:	J. PAK
Serial No.:	09/614,631	Group Art Unit:	1653
Filed:	JULY 12, 2000	Docket No.:	163.1382US01
Title:	METHOD AND COMPOSITION FOR INHIBITION OF MICROBIAL GROWTH IN AQUEOUS FOOD TRANSPORT AND PROCESS STREAMS		

CERTIFICATE UNDER 37 CFR 1.6(d):

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on

February 9, 2004

By: 
Name:**DECLARATION UNDER 37 CFR § 1.132**Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

I, John D. Hilgren, declare and state the following:

1. I am an inventor of the subject matter of the patent application identified above and an employee of Ecolab, Inc., the assignee of the patent application identified above.

2. I have a B.S. degree in Medical Technology from the University of Minnesota. I have published seven articles in trade journals relating to the use of biocides for sanitation. I have published an article in a scientific journal relating to the use of antimicrobial agents. I co-authored a chapter on methods of testing fungicides in the current (5th) edition of the book "Disinfection, Sterilization, and Preservation" edited by Seymour S. Block. I am an inventor of two patents, both of relating to antimicrobial agents and methods employing them. I presented a technical session on peroxyacid rinses as antimicrobial interventions at the 2002 Institute of Food Technologists Annual Meeting. I am active in the Institute of Food Technologists (a professional society).

3. I understand that the Examiner has used PCT parent publication WO 99/51095 to Hei t al. (the WO publication), supported by three additional references (Lokkesmoe et al. (WO 94/21122), FSTA abstracts 1999(10):C1223 and 2000(06):J1220 and Taylor), to reject claims of this patent application as obvious.

4. In fact, the presently claimed compositions provided antimicrobial activity that was unexpectedly good compared, for example, to peroxyacetic acid compositions within the broad ranges of ingredients reported in the WO publication. For example, the examples in the WO publication employed use compositions made from a concentrate called KX-6049. We report results using use compositions of KX-6049 in accompanying Exhibit B. The presently claimed compositions provide superior results compared to KX-6049. My coinventors and I discovered, quite unexpectedly, that higher concentrations of peroxyoctanoic acid relative to peroxyacetic acid resulted in surprising increases in antimicrobial activity.

5. The present claims state that the compositions or flumes have "at least about 1 part by weight of peroxyoctanoic acid for each about 5 parts of peroxyacetic acid." This ratio, together with the narrowly tailored amounts of ingredients in the claimed compositions, describes those compositions that exhibited unexpected results. The references used to reject claims of this patent application make no mention of such a ratio.

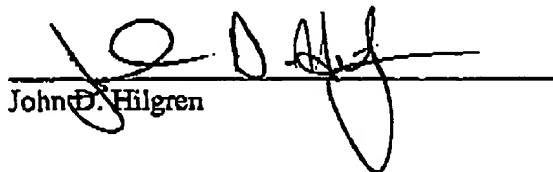
6. Compositions including this ratio of peroxyoctanoic acid exhibit unexpected results compared to compositions including smaller amounts of peroxyoctanoic acid. The compositions described in the table below meet the limitations of the present claims and include the compositions described at page 15 of the present application. These compositions produced unexpected and surprising results summarized below:

Composition	Relative [POOA]	POOA:POAA	% Reduction in <i>Aspergillus</i> sp.	Log Reduction in <i>S. cerevisiae</i>	Log Reduction in <i>E. coli</i>	Log Reduction in <i>Staph. aureus</i>
Page 15 of Present Application	1	1:4		4.8 (10 sec) >5.2 (20 and 30 sec)	5.3 (10 sec) >7 (20 and 30 sec)	>6.6 (10-30 sec)
Presently Claimed A	0.85	1:4.7	97-100 (10 or 20 min) 97-100 (30 or 40 min)			
Presently Claimed B	0.67	1:5		0.9 (10 sec) >5.2 (20 and 30 sec)	3.7 (10 sec) >7 (20 and 30 sec)	5.7 (10 sec) >6.6 (20 and 30 sec)
Comparative Test A	0.5	1:10		0.5 (10 sec) 2.1 (20 sec) >5.2 (30 sec)	2.7 (10 sec) >7 (20 and 30 sec)	5.5 (10 sec) >6.6 (20 and 30 sec)
Comparative Test B	0.15	1:37	0 (10 or 20 min) 22-92 (30 or 40 min)			

7. These results demonstrate that compositions described in the present claims show unexpectedly large increases in killing any of several microorganisms. This degree of antimicrobial activity was unexpected in comparison to the activity reported in the WO publication and the other references used by the Examiner in rejecting claims. For example, the presently claimed compositions show unexpectedly greater activity against fungi (yeast (*S. cerevisiae*) and mold (*Aspergillus* sp.)), *E.coli.*, and *S. aureus*.

8. The present claims state that the compositions or flumes have "at least about 1 part by weight of peroxyoctanoic acid for each about 5 parts of peroxyacetic acid." The references used to reject the claims of this patent application do not mention this ratio in combination with the presently claimed amounts. Therefore, I conclude that the compositions described in the present claims of this patent application provide results that are unexpected and surprising in comparison with results from previously described compositions including peroxyoctanoic acid and peroxyacetic acid.

9. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.


John D. Hilgren